

## **REMARKS/ARGUMENTS**

### **A. Summary of the Amendments**

The application now contains 72 claims.

Claims 1, 3, 20, 21, 36, 39, 43, 46, 55, 56 and 63 have been amended to clarify any potential ambiguity in these claims.

Claims 2, 4-19, 22-35, 37-38, 40-42, 44-45, 47-54, 57-62 and 64-66 are unchanged.

Claim 67 has been cancelled.

Claims 68 to 73 are new.

The Applicant submits that support for the claim amendments exists in the specification as originally filed and that no new matter is being added to the present application through the present amendment. In particular, the Applicant submits that support for the subject matter of claims 68 to 73 can be found on p. 23 line 30 to p. 24 line 24 of the specification, amongst others.

### **B. General Comment**

In his rejections, the Examiner refers to a patent "Fogagnolo" but the Applicant was unable to locate in the documents provided by the Examiner the serial number of the U.S. patent. The USPTO lists two U.S. Patents under the inventor name "Fogagnolo" namely U.S. Patent no. 6,862,978 and U.S. Patent no. 6,766,728.

In the interest of moving matters forward, the Applicant has assumed that the Examiner was referring to U.S. Patent No. 6,766,728 since the latter was relied upon by Examiner Mark H. PASCHALL in another patent application owned by the same assignee as the present patent application, namely U.S. patent application no. 10/651,949. If the Applicant has made an incorrect assumption, the Examiner is respectfully requested to provide a clarification with regards to this matter.

**C. Statements of Rejection & Reply - 35 USC §112 rejections**

In the Office Action the Examiner rejected claims 3 and 51-52 under 35 USC §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which the applicant regards as the invention.

With respect to claim 3, the Examiner indicated that he was of the view that claim 3 included no structural limitations nor means/function limitation to further limit the claimed apparatus. In response to the Examiner's rejection, the Applicant has amended claim 3 and submits that claim 3, as amended, satisfies the requirement of 35 USC §112, second paragraph. As such, the Applicant respectfully requests that the Examiner withdraw his rejection under 35 USC §112 with regard to claim 3.

With respect to claims 51-52, the Examiner indicated that claim 51 was vague and indefinite in that a single temperature measurement cannot lead to a rate of temperature change since such a rate determination would logically need a plurality of temperature measurements. The Applicant respectfully disagrees with the Examiner's interpretation of the expression "temperature measurement". More specifically, the Applicant submits that the expression "temperature measurement" can be used to refer to either one of a temperature measurement or a rate of change since the rate of change of temperature is itself a measurement. This interpretation is consistent with the use of this expression in the present specification (see p. 30 lines 23-26) which reads:

*"In an alternative, non-limiting embodiment, instead of determining a new delay time on the basis of the water temperature in the water receptacle*

*18, the new delay time can be determined on the basis of the ambient air temperature measurement, which can be indicative of an air temperature, or a rate of increase/decrease of temperature.”*

As such, the Applicant submits that claims 51-52 satisfy the requirement of 35 USC §112, second paragraph. The Applicant respectfully requests that the Examiner withdraw his rejection under 35 USC §112 with regard to claims 51-52.

#### **D. Statements of Rejection & Reply - 35 USC §102 and §103 rejections**

The Examiner's rejections under 35 USC §102 and §103 will now be addressed for each claim of the present application.

##### **Claim 1**

In the Office Action, the Examiner rejected claim 1 under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,476,363 (hereinafter referred to as Authier et al.). The applicant respectfully disagrees with the examiner and submits that the subject matter of claim 1 is neither anticipated nor rendered obvious by Authier et al. The Applicant has amended claim 1 to clarify any possible ambiguity in this claim.

Claim 1, as amended, reads as follows:

1. A temperature control system for a bathing unit, the bathing unit including a receptacle for holding water and a heating module for heating the water supplied to the receptacle, said temperature control system comprising:
  - a) a plurality of actuators associated to the heating module, said plurality of actuators being adapted for acquiring:
    - i) a first set of actuation patterns causing the heating module to be in a non-heating state, said first set of actuation patterns including at least two configurations;
    - ii) a second set of actuation patterns causing the heating module to be in a heating state, said second set of actuation patterns including at least one configuration;
  - b) a temperature regulation device in communication with the plurality of actuators, said temperature regulation device operative for controlling said plurality of actuators such as to cause the heating module to be in either one of the heating state or the non-heating state, *said temperature*

*regulation device being adapted to select a configuration from the first set of actuation patterns for causing the heating module to be in the non-heating state, the selection being effected such as to alternate activation of the actuators in said plurality of actuators.*

The Applicant submits that the subject matter of claim 1, as amended, is neither anticipated nor rendered obvious by Authier et al. Without limiting the generality of the foregoing, the applicant submits that the above emphasized limitations of claim 1 are neither taught nor suggested by Authier et al. nor any of the other cited documents.

Claim 1 requires a temperature regulation device adapted to select a configuration from the first set of actuation patterns for causing the heating module to be in the non-heating state, the selection being effected such as to alternate activation of the actuators in the plurality of actuators. In Authier et al., there is not such selection. Rather, in Authier et al., each actuator 53a, 53b, 111 is independently controlled on the basis of certain measurements, be it water level in the heater device or water temperature. In Authier et al., for each given situation, a *pre-determined configuration* is caused to occur with no selection on the part of the controller. Even if it could be argued that a selection did occur in Authier, there is still no selection made such as to *alternate activation of the actuators in the plurality of actuators*. Conversely, the claimed invention provides for a selection of a configuration amongst a set of actuation patterns where the selection is affected such as to alternate activation of the actuators in the plurality of actuators. The present application describes advantages of such a feature (see for example p. 12 lines 11-16) one of which is to extend the life of the individual actuators through the alternating activation of the actuators in the plurality of actuators. This feature of alternating activation of the actuators is neither taught nor suggested in Authier et al. nor in any of the documents cited by the Examiner.

In light of the above, the Applicant submits that the subject matter of claim 1, as amended, is neither taught nor suggested by the documents cited by the Examiner. Consequently, the Applicant submits that claim 1 is patentable.

**Claims 2-19**

In the Office Action, the Examiner rejected claims 2-9 and 12-17 under 35 USC §102(b) as being anticipated by Authier et al.. The Examiner further rejected claims 10 and 11 under 35 USC §103(a) as being unpatentable over Authier et al. in view of U.S. Patent No. 5,308,957 (hereinafter referred to as Huffington). The Examiner further rejected claims 18 and 19 under 35 USC §103(a) as being unpatentable over Authier et al. in view of U.S. Patent No. 6,766,728 (hereinafter referred to as Fogagnolo).

Claims 2-19 depend directly or indirectly from claim 1 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 1, the applicant submits that the subject matter of claims 2-19 is also neither taught nor suggested by the documents cited by the Examiner.

In addition to the above, the application submits that claims 5-7 are further patentable on the grounds that they describe additional features that are neither taught nor suggested by the cited documents.

More specifically, claims 5-7 read as follows:

5. *A temperature control system as defined in claim 1, wherein said temperature regulation device is operative for selecting a configuration from the first set of actuation patterns on the basis of a pattern.*
6. *A temperature control system as defined in claim 5, wherein said pattern is a random pattern.*
7. *A temperature control system as defined in claim 1, wherein said first set of actuation patterns includes two configurations, said temperature regulation device being operative for selecting between said two configurations in an alternating manner.*

There is nothing in Authier et al. which teach or suggests a selection of a configuration on the basis of a pattern (claim 5) and even less on the basis of a random pattern (claim 6).

With respect to claim 5, in Authier et al., the actuation and de-actuation of the various actuators is entirely based on measurements taken and not on the basis of a pattern.

With respect to claim 6, there is nothing in Authier et al. that resembles a random pattern. Rather in Authier et al., any actuation patterns are determined entirely by measurements of various parameters and are not random at all. On page 2 of the Office Action the Examiner makes the statement:

“[...] the spa controller in Authier et al. does teach in Figures 1, 2, 5 three series connect actuators 53a, a and 11 which energize and deenergize the heating element in patterns dependent on multiple factors, *which could be in a random occurrence pattern.*” *[our emphasis]*

However, there is nothing in Authier et al. which implies or remotely suggests anything random about the energize and deenergize of the heating element nor of the actuators. The Applicant is unclear as to where the Examiner is finding this feature in Authier et al. or in the other cited documents and respectfully requests either that the Examiner point out in Authier et al. where such feature is present or withdraw his rejection of claim 6.

With respect to claim 7, there is nothing in Authier et al. that teaches or suggests selecting between said two configurations **in an alternating manner**. Rather in Authier et al., any actuation patterns are determined entirely by measurements of various parameters.

Consequently, the Applicant submits that, in addition to the reasons set forth with respect to base claim 1, the subject matter of claims 5-7 is neither anticipated nor rendered obvious by the documents cited by the Examiner for the additional reasons presented above.

**Claim 20**

In the Office Action, the Examiner has rejected claim 20 under 35 USC §103(a) as being unpatentable over Authier et al. in light of Fogagnolo. The applicant respectfully disagrees with the examiner and submits that the subject matter of claim 20 is neither anticipated nor rendered obvious by Authier et al. alone or in combination with Fogagnolo. The Applicant has amended claim 20 to clarify any possible ambiguity in this claim.

Claim 20, as amended, reads as follows:

20. *A method for controlling the water temperature of a bathing unit, the bathing unit including a receptacle for holding the water, a heating module for heating the water supplied to the receptacle, and a plurality of actuators associated to the heating module, the plurality of actuators being adapted for acquiring:*
- a) *a first set of actuation patterns causing the heating module to be in a non-heating state, said first set of actuation patterns including at least two configurations;*
  - b) *a second set of actuation patterns causing the heating module to be in a heating state, said second set of actuation patterns including at least one configuration;*
- said method comprising:*
- a) *receiving a signal indicative of a water temperature;*
  - b) *processing the signal indicative of a water temperature on the basis of a desired water temperature to derive a control signal;*
  - c) *controlling said plurality of actuators such as to cause the heating module to acquire either one of a heating state or a non-heating state on the basis of said control signal;*
  - d) *selecting a configuration from the first set of actuation patterns when said control signal is indicative that the heating module should acquire the non-heating state, the selection being effected such as to alternate activation of the actuators in said plurality of actuators.*

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicant respectfully disagrees with the Examiner's rejection on the basis that the Examiner has failed to establish a *prima facie* case of obviousness on the basis that the art reference (or references when combined) do not teach or suggest all the claim limitations.

The Applicant submits that the subject matter of claim 20, as amended, is neither anticipated nor rendered obvious by Authier et al. alone or in view of Fogagnolo. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitations of claim 20 are neither taught nor suggested by the documents cited by the Examiner.

Claim 20 requires the step of selecting a configuration from the first set of actuation patterns [...] the selection being effected such as to alternate activation of the actuators in the plurality of actuators. In Authier et al., there is not such selection. Rather, in Authier et al., each actuator 53a, 53b, 111 is independently controlled on the basis of certain measurements, be it water level in the heater device or water temperature. In Authier et al., for each given situation, a pre-determined configuration is caused to occur with no selection on the part of the controller. Even if it could somehow be argued that there was a selection in Authier et al., there is no selection effected such as to *alternate activation of the actuators in the plurality of actuators*. Conversely, the claimed invention provides for a selection of a configuration amongst a set of actuation patterns where the selection is effected such as to alternate activation of the actuators in the plurality of actuators. The present application describes advantages of such a feature (see for example p. 12 lines 11-16) one of which is to extend the lifetime of the individual actuators through the alternating activation of the actuators in the plurality of actuators. This feature is neither taught nor suggested in Authier et al. nor in any of the documents cited by the Examiner.

The above-described feature is also completely absent from Fogagnolo.



In light of the above, the Applicant submits that the subject matter of claim 20, as amended, is neither taught nor suggested by the documents cited by the Examiner. Consequently, the Applicant submits that claim 20 is patentable.

**Claims 21-35**

In the Office Action, the Examiner has rejected claims 21-25 and 30-35 as being unpatentable over Authier et al. in light of Fogagnolo. The Examiner further rejected claims 26-29 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Fogagnolo in further view of Huffington.

Claims 21-35 depend directly or indirectly from claim 20 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 20, the applicant submits that the subject matter of claims 21-35 is also neither taught nor suggested by the documents cited by the Examiner.

In addition to the above, the application submits that claims 23-25 are further patentable on the grounds that they describe additional features that are neither taught nor suggested by the cited documents.

More specifically, claims 23-25 read as follows:

- 23. A method as defined in claim 20, further comprising selecting a configuration from the first set of actuation patterns on the basis of a pattern.*
- 24. A method as defined in claim 23, wherein said pattern is a random pattern.*
- 25. A method as defined in claim 20, wherein the first set of actuation patterns includes two configurations, said method comprising selecting between said two configurations in an alternating manner.*

For the same reasons as those set forth with respect to claims 5, 6 and 7, the applicant submits that the subject matter of claim 23-25 is neither taught nor suggested by the documents cited by the Examiner.

**Claim 36**

In the Office Action, the Examiner has rejected claim 36 as being anticipated by U.S. Patent No. 6,476,363 (hereinafter referred to as Authier et al.). The applicant respectfully disagrees with the examiner and submits that the subject matter of claim 36 is neither anticipated nor rendered obvious by Authier et al. Further, the Applicant submits that the Examiner has not indicated where in the reference cited the features of claim 36 were described.

Claim 36 reads as follows:

36. *A method for controlling heating of water in a bathing unit, the bathing unit including a receptacle for holding water, a heating module for heating the water supplied to the receptacle and a pump for circulating the water between the receptacle and the heating module, said method comprising:*
- a) *intermittently causing activation of the pump to cause water to circulate between the receptacle and the heating module, an activation of the pump occurring after a certain delay time after a deactivation of the pump;*
  - b) *modifying the certain delay time at least in part on the basis of temperature measurements of the water taken between successive activations of the pump and on the basis of an ambient air temperature measurement.*

The Applicant submits that the subject matter of claim 36 is neither anticipated nor rendered obvious by Authier et al. Without limiting the generality of the foregoing, the applicant submits that the above emphasized limitations of claim 36 are neither taught nor suggested by Authier et al. nor any of the other cited documents.

There is nothing in Authier et al. that teaches or suggests modifying a time delay between a pump deactivation and pump activation on the basis of an ambient temperature measurement.

If the Examiner disagrees, the Applicant requests that the Examiner point out where in the reference cited the above described feature is taught. Otherwise, the Examiner is respectfully requested to withdraw his rejection of claim 36.

**Claims 37- 42**

In the Office Action, the Examiner has rejected claims 37-39 under 35 USC §102(b) as being anticipated by Authier et al.. In the Office Action, the Examiner has also rejected claims 40-42 under 35 USC §103(a) as being unpatentable over Authier et al. in view of U.S. Patent No. 6,590,188 (hereinafter referred to as Cline et al.).

Claims 37-42 depend directly or indirectly from claim 36 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 36, the applicant submits that the subject matter of claims 37-42 is also neither taught nor suggested by the documents cited by the Examiner.

**Claim 43**

In the Office Action, the Examiner has rejected claim 43 as being anticipated by Authier et al. The applicant respectfully disagrees with the examiner and submits that the subject matter of claim 43 is neither anticipated nor rendered obvious by Authier et al. Further, the Applicant submits that the Examiner has not indicated where in the reference cited the features of claim 43 were described.

Claim 43 reads as follows:

43. (Original) *A temperature control system for a bathing unit, the bathing unit including a receptacle for holding water, a heating module for heating the water supplied to the receptacle and a pump for circulating water between the receptacle and the heating module, said temperature control system comprising:*

- a) *a temperature sensor for measuring the temperature of the water;*
- b) *a temperature regulation device in communication with said temperature sensor, said temperature regulation device being operative for:*
  - i) *intermittently causing activation of the pump to cause water to circulate between the receptacle and the heating module, an activation of the pump occurring after a certain delay time after a deactivation of the pump;*
  - ii) *modifying the certain delay time at least in part on the basis of temperature measurements of the water taken between successive activations of the pump and on the basis of an ambient air temperature measurement.*

The Applicant submits that the subject matter of claim 43 is neither anticipated nor rendered obvious by Authier et al. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitations of claim 43 are neither taught nor suggested by Authier et al. nor any of the other cited documents. If the Examiner disagrees, the Applicant requests that the Examiner point out where in the reference cited the above described feature is taught. Otherwise, the Examiner is respectfully requested to withdraw his rejection of claim 43.

#### **Claims 44-49**

In the Office Action, the Examiner has rejected claims 44-46 under 35 USC §102(b) as being anticipated by Authier et al. In the Office Action, the Examiner has rejected claims 47-49 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Cline et al.

Claims 44-49 depend directly or indirectly from claim 43 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 43, the applicant submits that the subject matter of claims 44-49 is also neither taught nor suggested by the documents cited by the Examiner.

**Claim 50**

In the Office Action, the Examiner has rejected claim 50 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Cline et al. The applicant respectfully disagrees with the examiner and submits that the subject matter of claim 50 is neither anticipated nor rendered obvious by Authier et al. alone or in combination with Cline et al.

Claim 50 reads as follows:

*50. A method for controlling the heating of water in a bathing unit, the bathing unit including a receptacle for holding water, a heating module for heating the water supplied to the receptacle and a pump for circulating the water between the receptacle and the heating module, said method comprising:*

- a) intermittently causing activation of the pump to cause water to circulate between the receptacle and the heating module, an activation of the pump occurring after a certain delay time after a deactivation of the pump;*
- b) modifying the certain delay time at least in part on the basis of an ambient air temperature measurement.*

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicant respectfully disagrees with the Examiner's rejection on the basis that the Examiner has failed to establish a *prima facie* case of obviousness on the basis that the art reference (or references when combined) do not teach or suggest all the claim limitations.

The Applicant submits that the subject matter of claim 50 is neither anticipated nor rendered obvious by the documents cited by the Examiner. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitations

of claim 50 are neither taught nor suggested by Authier et al. nor any of the other cited documents.

There is nothing in Authier et al. which teaches:

*“an activation of the pump occurring after a certain delay time after a deactivation of the pump;”*

and

*“modifying the certain delay time at least in part on the basis of an ambient air temperature measurement.”*

This is also not taught in any way in Cline et al.. Cline mentions water temperature and the outside temperature. However, the mere existence in Cline of a mention of outside temperature in no way implies how this parameter is used in the control of the spa and more specifically, Cline et al. does not suggest that the ambient air temperature can be *used to control(or modify) a time delay between pump activations*. Conversely, claim 50 requires *“modifying the certain delay time at least in part on the basis of an ambient air temperature measurement.”*.

If the Examiner disagrees with the above, the Applicant requests that the Examiner point out where in the reference cited the above described feature is taught. Otherwise, the Examiner is respectfully requested to withdraw his rejection of claim 50.

In light of the above, the Applicant submits that the subject matter of claim 50 is neither taught nor suggested by the documents cited by the Examiner.

#### **Claims 51 – 55**

In the Office Action, the Examiner has rejected claims 51-55 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Cline et al.

Claims 51-55 depend directly or indirectly from claim 50 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 50, the applicant submits that the subject matter of 51-55 is also neither taught nor suggested by the documents cited by the Examiner.

### **Claim 56**

In the Office Action, the Examiner has rejected claim 56 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Knepler or Dytch et al. The applicant has amended claim 56 in order to add therein a feature previously present in former claim 67, now cancelled. The Applicant submits that the subject matter of claim 56, as amended, is neither anticipated nor rendered obvious by Authier et al. alone or in combination with Knepler or Dytch et al.

Claim 56, as amended, reads as follows:

*56. A temperature control system for a bathing unit, the bathing unit including a receptacle for holding water and a plurality of bathing unit components, said temperature control system comprising:*

- a) a circulation system through which water can flow, said circulation system comprising:
  - i) a heating module for heating water; and*
  - ii) circulation piping connecting said heating module to the receptacle for allowing water to be exchanged between the heating module and the receptacle;**
- b) a solid state device operative for controlling the power supplied to said heating module, said solid state device positioned in a thermally conductive relationship with the water in said circulation system such as to allow heat to dissipate from said solid state device to water in said circulation system;*
- c) a temperature regulation device in communication with said solid state device, said temperature regulation device being operative for controlling said solid state device such as to regulate the amount of power supplied to said heating module, said temperature regulation device being operative for reducing the amount of current supplied to the heating module upon detection of the operation of one or more bathing unit components in said plurality of bathing unit components.*

The Applicant submits that the subject matter of claim 56 is neither anticipated nor rendered obvious by the documents cited with the Examiner. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitations of claim 56 are neither taught nor suggested by the documents cited with the Examiner nor any of the other cited documents.

Neither Authier, Knepler nor Dytch et al. teaches or suggests a temperature regulation device operative for reducing the amount of current supplied to the heating module *upon detection of the operation of one or more bathing unit components in a plurality of bathing unit components*. This feature is simply not present in any of these documents in any way. If the Examiner disagrees, the Applicant respectfully requests that the Examiner indicate where in the references cited the above-described feature is present.

In light of the above, the Applicant submits that the subject matter of claim 56 is neither taught nor suggested by the cited documents.

#### Claims 57- 62

In the Office Action, the Examiner has rejected claims 57-62 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Knepler or Dytch et al.

Claims 57-62 depend directly or indirectly from claim 56 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 56, the applicant submits that the subject matter of 57-62 is also neither taught nor suggested by the documents cited by the Examiner.

#### Claim 63

In the Office Action, the Examiner has rejected claim 63 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Knepler or Dytch et al. The applicant has



amended claim 63 in order to add therein a feature previously present in former claim 67, now cancelled. The Applicant submits that the subject matter of claim 63, as amended, is neither anticipated nor rendered obvious by Authier et al. alone or in combination with Knepler or Dytch et al.

Claim 63 as amended reads as follows:

63. *A temperature control system for a bathing unit, the bathing unit including a receptacle for holding water, a heating module for heating the water of the receptacle and a plurality of additional bathing unit components, said temperature control system comprising:*
- a) *at least one solid state device associated to the heating module, said solid state device being adapted for supplying power to the heating module;*
  - b) *a temperature regulation device in communication with said solid state device, said temperature regulation device being operative for controlling said solid state device such as to regulate the amount of power supplied to said heating module, said temperature regulation device being operative for reducing the amount of current supplied to the heating module upon detection of the operation of one or more bathing unit components in said plurality of additional bathing unit components.*

The Applicant submits that the subject matter of claim 63 is neither anticipated nor rendered obvious by the documents cited with the Examiner. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitation of claim 63 is neither taught nor suggested by the documents cited with the Examiner nor any of the other cited documents.

Neither Authier, Knepler nor Dytch et al. teaches or suggests a temperature regulation device operative for reducing the amount of current supplied to the heating module *upon detection of the operation of one or more bathing unit components in a plurality of bathing unit components*. This feature is simply not present in any of these documents in any way. If the Examiner disagrees, the Applicant respectfully requests that the Examiner indicate where in the references cited the above-described feature is present.

In light of the above, the Applicant submits that the subject matter of claim 63 is neither taught nor suggested by the cited documents.

**Claims 64-66**

In the Office Action, the Examiner has rejected claims 64-66 under 35 USC §103(a) as being unpatentable over Authier et al. in view of Knepler or Dytch et al.

Claims 64-66 depend directly or indirectly from claim 63 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 63, the applicant submits that the subject matter of 64-66 is also neither taught nor suggested by the documents cited by the Examiner.

**Claim 68**

New independent claim 68 reads as follows:

68. (New) *A temperature control system for a bathing unit, the bathing unit including a receptacle for holding water, said temperature control system comprising:*
- a) *a circulation system through which water can flow, said circulation system comprising:*
    - i) *a heating module for heating water; and*
    - ii) *circulation piping connecting said heating module to the receptacle for allowing water to be exchanged between the heating module and the receptacle;*
  - b) *a solid state device operative for controlling the power supplied to said heating module, said solid state device positioned in a thermally conductive relationship with the water in said circulation system such as to allow heat to dissipate from said solid state device to water in said circulation system;*
  - c) *a temperature regulation device in communication with said solid state device, said temperature regulation device being operative for:*
    - i) *receiving information conveying a water temperature associated with water in the receptacle of the bathing unit;*
    - ii) *when the water temperature is below a certain desired temperature, controlling the solid state device to supply power to the heating module at a first energy level;*
    - iii) *when the water temperature is above the certain desired temperature, controlling the solid state device to supply power to the heating module at a*

*second energy level, the second energy level being a lower energy level than the first energy level.*

The Applicant submits that the subject matter of claim 68 is neither anticipated nor rendered obvious by the documents cited with the Examiner. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitation of claim 68 is neither taught nor suggested by the documents cited with the Examiner nor any of the other cited documents.

Neither Authier, Knepler nor Dytch et al. teaches or suggests a temperature regulation device which is operative for:

- receiving information conveying a water temperature associated with water in the receptacle of the bathing unit;
- when the water temperature is below a certain desired temperature, controlling the solid state device to supply power to the heating module at a first energy level;
- when the water temperature is above the certain desired temperature, controlling the solid state device to supply power to the heating module at a second energy level, the second energy level being a lower energy level than the first energy level.

If the Examiner disagrees, the Applicant respectfully requests that the Examiner indicate where in the references the above described features are shown.

In light of the above, the Applicant submits that the subject matter of claim 68 is neither taught nor suggested by the cited documents.

#### **Claims 69- 71**

Claims 69-71 depend directly or indirectly from claim 68 and as such incorporate by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 68, the applicant submits that the subject matter of 69-71 is also neither taught nor suggested by the documents cited by the Examiner.

**Claim 72**

New independent claim 68 reads as follows:

72. *A method a method for controlling the water temperature of a bathing unit, the bathing unit including a receptacle for holding the water, a circulation system including a heating module and circulation piping, the heating module being for heating the water supplied to the receptacle, the circulation piping connecting the heating module to the receptacle for allowing water to be exchanged between the heating module and the receptacle, said method comprising:*

- a) *receiving a signal indicative of a water temperature;*
- b) *providing a solid state device operative for controlling the power supplied to the heating module, the solid state device being positioned in a thermally conductive relationship with the water in said circulation system such as to allow heat to dissipate from said solid state device to water in said circulation system;*
- c) *processing the signal indicative of a water temperature on the basis of a desired water temperature to derive a control signal, the control signal being adapted for:*
  - i) *when the signal indicative of a water temperature conveys a water temperature below the certain desired temperature, controlling the solid state device to supply power to the heating module at a first energy level;*
  - ii) *when the signal indicative of a water temperature conveys a water temperature above the certain desired temperature, controlling the solid state device to supply power to the heating module at a second energy level, the second energy level being a lower energy level than the first energy level.*

The Applicant submits that the subject matter of claim 72 is neither anticipated nor rendered obvious by the documents cited with the Examiner. Without limiting the generality of the foregoing, the applicant submits that the above-emphasized limitation of claim 72 is neither taught nor suggested by the documents cited with the Examiner nor any of the other cited documents.

If the Examiner disagrees, the Applicant respectfully requests that the Examiner indicate where in the references the above described features are shown.

In light of the above, the Applicant submits that the subject matter of claim 72 is neither taught nor suggested by the cited documents.

**Claim 73**


Claim 73 depends directly or indirectly from claim 72 and as such incorporates by reference all its limitations. As such, since none of the documents cited teach or suggest the subject matter of claim 72, the applicant submits that the subject matter of claim 73 is also neither taught nor suggested by the documents cited by the Examiner.

**CONCLUSION**

It is respectfully submitted that claims 1-66 and 68-73 are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance of claims 1-66 and 68-73 at an early date is solicited.

If the claims of the application are not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims or in making constructive suggestions so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,

  
Brigide Mattar  
Reg. No. 51,284  
Agent for the Applicant

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SMART & BIGGAR  
1000 De La Gauchetière Street West  
Suite 3300,  
Montreal, Quebec H3B 4W5  
CANADA  
Tel: (514) 954-1500  
Fax: (514) 954-1396